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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/645,471	08/24/2000	Masaya Yukinobu	000996	4323

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EXAMINER

KRUER, KEVIN R

ART UNIT PAPER NUMBER

1773

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/645,471

Applicant(s)

YUKINOBU ET AL.

Examiner

Kevin R Kruer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16, 18-20 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16, 18-20 and 22-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings filed August 24, 2000 are acceptable.

Specification

3. The amended title is acceptable.
4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 16 18-20 and 22-24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,447,909 in view of WO99-01766 (herein referred to as Buining).

US'909 claims a gold-coated silver particles with a mean particle diameter of 1-100nm dispersed in a solvent (claim 1). The particles comprise over 50-95 parts by weight of gold (claim 1). The solution may further comprise an inorganic binder (claim 4). The solutions are useful for producing transparent conductive materials for front plates of displays (paragraph 0001).

US'909 does not teach that the composition should comprise a functional group compound having at least one functional group selected from mercapto- groups, sulfide groups, and polysulfide groups. However, Buining teaches a solution comprising metal particles and a mercaptosilane residue bound to said metal particles (abstract). The metal particle has a particle size of 5nm or lower and comprise gold or silver (abstract). The mercaptosilane stabilizes the metal particle in a manner that resembles the role of the surfactant (page 12, lines 17+). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the mercaptosilane to the solution taught in US'909. The motivation for doing so would have been to stabilize the metal particles in solution.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 16, 18-20, and 22-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant claims that the gold containing particles contain "over 50wt%" to 95 wt% of gold. The original disclosure does not contain support for the endpoint "over 50wt%." Applicant argues that the examples in the specification are all over 50%. However, none of the examples give sufficient support the newly claimed endpoint.

Claim Rejections - 35 USC § 102

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. The rejection of claims 13-15, 25, and 28 under 35 U.S.C. 102(b) as being anticipated by Engle et al (US 5,888,290) has been overcome by amendment.

Claim Rejections - 35 USC § 103

11. Claims 16, 19, 20, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP11-203943 (herein referred to as "Yukinobu") in view of WO99-01766 (herein referred to as Buining).

Yukinobu teaches gold-coated silver particles with a mean particle diameter of 1-100nm dispersed in a solvent (claim 7). The particles comprise 5-100 parts by weight of

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gold per 100 parts by weight of silver (claim 2)-which equates to 4-50wt% of gold. The examiner notes that 50wt% reads on the claimed endpoint of claims 17, 26, and 27.

The solution may further comprise silica sol as a binder (claims 11 and 12). The solutions are useful for producing transparent conductive materials for front plates of displays (paragraph 0001).

Yukinobu teaches that gold coated silver particles are preferred, but teaches that solid gold particles have traditionally been used in the art as the conductive particles in such transparent conductive materials for front plates of displays (0010). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize solid gold particles in place of the gold coated silver particles preferred in Yukinobu. The motivation for doing so would have been that gold particles are functionally equivalent to the gold plated silver particles in the art.

Yukinobu does not teach that the composition should comprise a functional group compound having at least one functional group selected from mercapto- groups, sulfide groups, and polysulfide groups. However, Buining teaches a solution comprising metal particles and a mercaptosilane residue bound to said metal particles (abstract). The metal particle has a particle size of 5nm or lower and comprise gold or silver (abstract). The mercaptosilane stabilizes the metal particle in a manner that resembles the role of the surfactant (page 12, lines 17+). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the mercaptosilane to the solution taught in Yukinobu. The motivation for doing so would have been to stabilize the metal particles in solution.

Response to Arguments

Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

The action has been taken non-final in order to apply the Double Patenting Rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer
Patent Examiner-Art Unit 1773